

SOUTH AFRICAN MEN'S HEALTH MONITORING SURVEY: A BIO-BEHAVIOURAL SURVEY AMONG MEN WHO HAVE SEX WITH MEN IN SOUTH AFRICA (SAMHMS 2019)

Background

The South Africa Men's Health Monitoring Study (SAMHMS 2019) is the second round of a bio-behavioural survey (BBS) among men who have sex with men (MSM) in South Africa. Based on available funding and consultation with key stakeholders, the second round was conducted in three of the eight cities/towns that were included in the first round: Cape Town Metropolitan City (Western Cape Province), Johannesburg Metropolitan City (Gauteng Province), and Mahikeng Town (North West Province). The survey, conducted from April to September 2019, aimed to: 1) estimate HIV prevalence, and viral load suppression among MSM who were receiving antiretroviral therapy; 2) identify risk factors for transmission of HIV; and 3) assess utilisation of HIV prevention and treatment programmes.

SAMHMS 2019 was commissioned by the Government of South Africa through the Department of Health (DoH), and the South Africa National AIDS Council (SANAC), with funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) received through the U.S. Centers for Disease Control and Prevention (CDC). The survey was implemented by The Aurum Institute South Africa and Anova Health Institute, in collaboration with local civil society and academic partners: National Institute for Communicable Diseases (NICD), TB/HIV Care Association, Engage Men's Health, Wits Reproductive Health Institute (WRHI), Gay Umbrella and Oasis. Technical assistance was received from CDC. Ethical approval for this survey was provided by the Human Research Ethics Committee of the University of the Witwatersrand (Ethics Reference # 181109), and CDC Center for Global Health (CGH HSR tracking # 2019-054a).

Survey Methods

Recruitment: MSM in the three cities were recruited through respondent-driven sampling (RDS). Up to eight MSM (seeds), with large and diverse MSM networks in each survey city, were approached by survey staff to initiate recruitment chains. Seeds were identified through formative assessments with MSM and service providers in each city. Individually coded referral coupons were used by the seeds, and, later, by other enrolled participants, as invitations for their peers to participate in the survey. Eligible MSM (Box 1) were asked to provide written consent for survey participation.

Collection of bio-behavioural data: Behavioural data were collected using a standardized questionnaire programmed for electronic data capture using IBM Clinical Development Software v2017.1.0¹ and administered by interviewers on a laptop computer (Box 2). All participants were asked to provide whole blood specimens for laboratory-based HIV serological testing. HIV viral load measurement and the qualitative detection of antiretrovirals (ARVs) was also performed on HIV-positive blood specimens. Survey staff facilitated the return of results and linkage to appropriate medical care through service providers in each city.

Analysis of bio-behavioural data: Data analyses were performed using RDS Analyst (RDS-A) version 3.6.0. RDS-A was also used to create survey weights, which generated estimates for the MSM population in each city. The findings presented in this summary sheet are weighted.

Box 1: Eligibility criteria for bio-behavioural survey (BBS)

- Designated male sex at birth
- Age ≥18 years
- Self-reported anal or oral sex with a biological male in the past 6 months
- In possession of a valid survey coupon
- Lived, worked, or socialized in the study area over the past 6 months
- Capable and willing to provide informed consent to participate

Box 2: BBS data collection

- Interviewer-administered survey questionnaire
- HIV antibody testing (enzyme immunoassay)
- Viral load measurement
- Qualitative testing for the presence of antiretrovirals

Key Findings

1. HIV prevalence

The highest HIV prevalence among MSM was in Johannesburg (44.3%), followed by Cape Town (26.8%), and Mahikeng (16.7%) (Table 2). In all three survey cities, HIV prevalence was lowest among MSM aged 18–24 years. In Johannesburg and Mahikeng, HIV prevalence was highest among MSM aged 35 years and above. In Cape Town, HIV prevalence among MSM aged 25–34 years was found to be similar to prevalence among MSM aged 35 years and above (Figure 1).

¹ <https://www.ibm.com/za-en/marketplace/clinical-development>

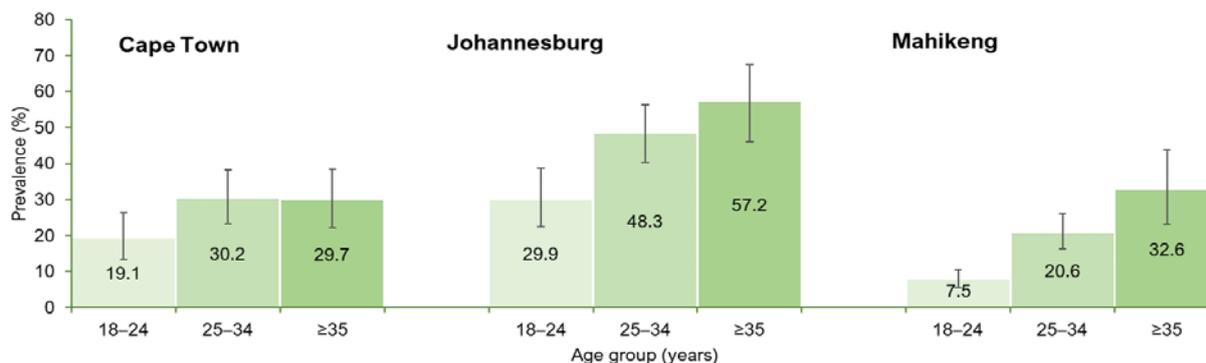
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Table 2: HIV prevalence among men who have sex with men by city, South Africa Men’s Health Monitoring Study 2019

	Number Participants tested for HIV	HIV-positive Participants	Point estimate adjusted for respondent-driven sampling %, (95% CI)
Cape Town	737	274	26.8 (22.6, 31.4)
Johannesburg	604	316	44.3 (39.2,49.6)
Mahikeng	804	159	16.7 (14.0,19.8)

*The 95% confidence interval (CI) indicates the interval within which the true population parameter is expected to fall 95% of the time from repeated surveys with the same design.

Figure 1: HIV prevalence among men who have sex with men by age group, South Africa Men’s Health Monitoring Study 2019



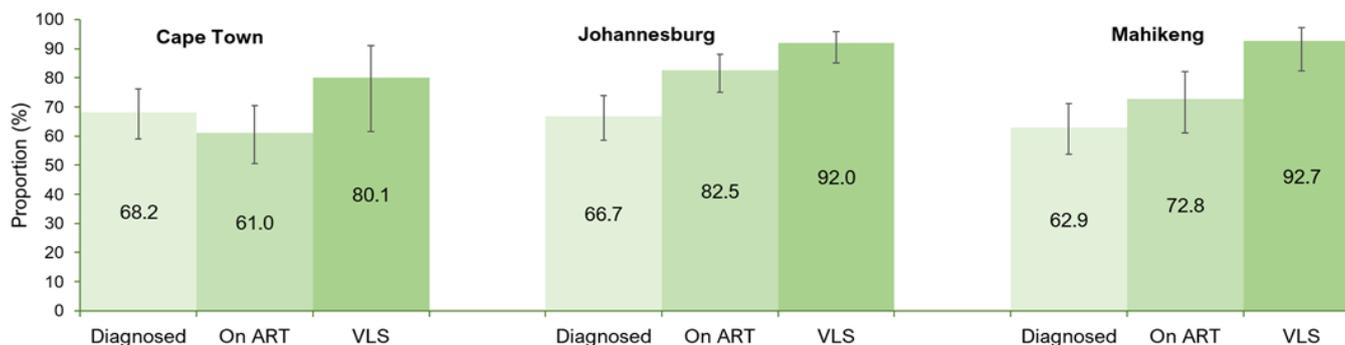
Error bars represent 95% CI (confidence interval), i.e., the interval within which the true population parameter is expected to fall 95% of the time from repeated surveys with the same design.

2. Achievement of the UNAIDS 90-90-90 targets among men who have sex with men living with HIV

Treatment of HIV infection with appropriate antiretroviral therapy (ART) reduces morbidity and mortality rates among people living with HIV (PLHIV) and prevents HIV transmission following viral load suppression. The South Africa National Strategic Plan on HIV, TB, and STIs 2017–2022² has specific goals for the HIV/AIDS program toward achieving the UNAIDS 90-90-90 targets³ by 2020. These targets aim to have: 90% of all people living with HIV (PLHIV) know their HIV status; 90% of all people diagnosed with HIV infection receive sustained antiretroviral therapy (ART); and 90% of all people receiving ART will be virally suppressed.

The proportion of MSM living with HIV who were aware of their HIV status was low, ranging from 62.9% in Mahikeng to 68.2% in Cape Town. Among MSM aware of their HIV status, 61.0% (Cape Town) to 82.5% (Johannesburg) were on ART. Viral load suppression among MSM aware of their HIV status and on ART ranged from 80.1% (Cape Town) to 92.7% (Mahikeng) (Table 3 & Figure 2).

Figure 2: 90-90-90 cascade for men who have sex with men living with HIV, South Africa Men’s Health Monitoring Study 2019



Error bars represent 95% CI (confidence interval) i.e., the interval within which the true population parameter is expected to fall 95% of the time from repeated surveys with the same design.

Insert numbers are conditional proportions; ART (antiretroviral therapy); VLS (viral load suppression)

² South Africa National AIDS Council (2017) Let Our Actions Count: South Africa’s National Plan on HIV, TB, AIDS and STIs 2017-2022. Pretoria: Department of Health. https://sanac.org.za/wp-content/uploads/2017/06/NSP_FullDocument_FINAL.pdf

³UNAIDS (2014) 90-90-90: An ambitious target to help end the AIDS epidemic. https://www.unaids.org/sites/default/files/media_asset/90-90-90_en.pdf

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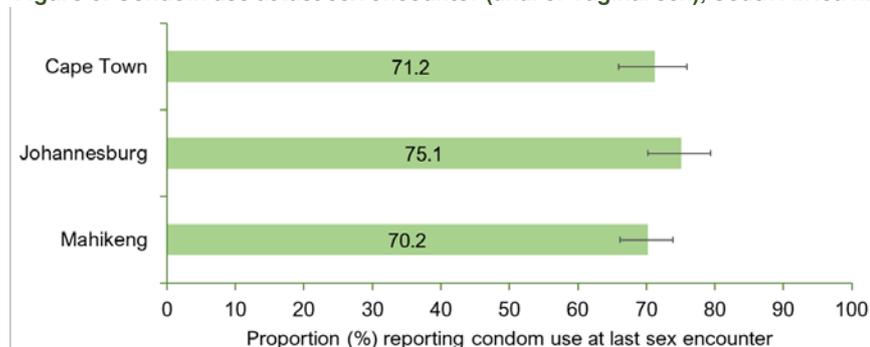
Table 3: 90-90-90 cascade for men who have sex with men living with HIV, South Africa Men's Health Monitoring Study 2019

	n ^a	N ^a	Point estimate adjusted for respondent driven sampling (%,95% Confidence Interval ^b)
Cape Town			
1 st 90: Aware of HIV status ^c	193	274	68.2 (59.1, 76.2)
2 nd 90: Aware of HIV status and on ART ^d	117	190	61.0 (50.5, 70.5)
3 rd 90: On ART and virologically suppressed ^e	104	117	80.1 (61.4, 91.0)
Johannesburg			
1 st 90: Aware of HIV status	233	316	66.7 (58.6, 73.9)
2 nd 90: Aware of HIV status and on ART	191	232	82.5 (75.1, 88.0)
3 rd 90: On ART and virologically suppressed	177	191	92.0 (85.2, 95.8)
Mahikeng			
1 st 90: Aware of HIV status	96	159	62.9 (53.7,71.2)
2 nd 90: Aware of HIV status and on ART	68	95	72.8 (61.0, 82.1)
3 rd 90: On ART and virologically suppressed	63	68	92.7(82.4, 97.2)

- a) Depending on the outcome reported; N = total number included in the denominator; n = number with measured outcome
 b) 95% CI (confidence interval) indicates the interval within which the true population parameter is expected to fall 95% of the time from repeated surveys of the same design.
 c) Awareness of HIV status was defined as self-reporting HIV-positive status and/or detection of ARVs in the participant's blood specimen.
 d) Being on antiretroviral therapy (ART) was based on the detection of ARVs in the participant's blood specimen.
 e) Viral load suppression is defined as HIV RNA <1,000 copies per ml of plasma among people living with HIV.
 Additional notes: Not all persons with a laboratory-confirmed HIV diagnosis had ARV results as some specimens were insufficient for testing – Cape Town (3 participants); Johannesburg (1 participant); and Mahikeng (1 participant).

3. Condom use

Figure 3: Condom use at last sex encounter (anal or vaginal sex), South Africa Men's Health Monitoring Study 2019

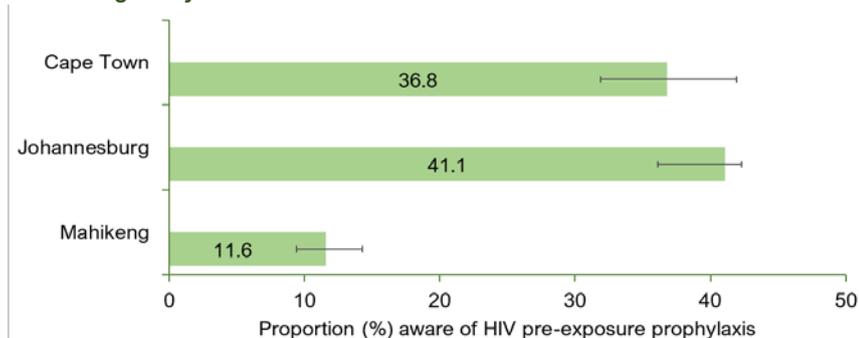


The majority of participants in all three cities reported using a condom the last time they had anal or vaginal sex with their last sex partner in the 3 months preceding the survey. This proportion ranged from 70.2% (95% CI: 66.2%–73.9%) in Mahikeng to 75.1% (95% CI: 70.2%–79.4%) in Johannesburg (Figure 3).

Error bars represent 95% CI (confidence interval) i.e., the interval within which the true population parameter is expected to fall 95% of the time from repeated surveys with the same design.

4. Awareness of HIV pre-exposure prophylaxis (PrEP) among all men who have sex with men

Figure 4: Awareness of HIV pre-exposure prophylaxis (PrEP) among all men who have sex with men, South Africa Men's Health Monitoring Study 2019



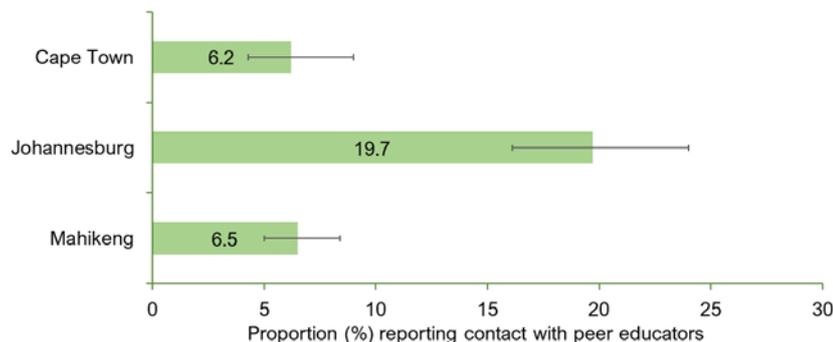
Less than half of participants in all three cities had ever heard about HIV pre-exposure prophylaxis, or PrEP (Figure 4). PrEP awareness was lowest in Mahikeng (11.6%, 95% CI: 9.4–14.3%), followed by Cape Town (36.8%, 95% CI: 31.9–41.9%), and highest in Johannesburg (41.1%, 95% CI: 36.1–42.3%).

Error bars represent 95% CI (confidence interval) i.e., the interval within which the true population parameter is expected to fall 95% of the time from repeated surveys with the same design.

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5. Contact with peer educators

Figure 5: Contact with peer educators in the 12 months preceding the survey, South Africa Men's Health Monitoring Study 2019



Error bars represent 95% CI (confidence interval) i.e., the interval within which the true population parameter is expected to fall 95% of the time from repeated surveys with the same design.

Contact with MSM peer educators in the 12 months preceding the survey was low in each city (Figure 5). Less than 1 in 10 MSM had contact with a peer educator in Cape Town (6.2%, 95% CI: 4.3–9.0%) and Mahikeng (6.5%, 95% CI: 5.0–8.4%). In comparison, a relatively higher proportion of MSM in Johannesburg (19.7%, 95% CI: 16.1–24.0%) had contact with peer educators.

Conclusions

- Our findings highlight sub-optimal progress towards achieving the UNAIDS 90-90-90 targets among MSM in all three cities. Despite a strategic mix of facility-based and community-based HIV testing approaches, less than 70% of MSM living with HIV were aware of their HIV status. Similarly, among MSM living with HIV, as low as 61.0% of those aware of their HIV status were on ART, despite the availability of ART for all people living with HIV in South Africa. More than 90% of MSM living with HIV on ART achieved virologic suppression in Johannesburg and Mahikeng, including excellent quality of care and effective treatment. In Cape Town, programme evaluations may provide further insights into areas amenable to interventions for promoting adherence and retention in care of MSM living with HIV and on ART.
- In South Africa, HIV PrEP is a key intervention for HIV prevention among key populations. However, awareness of HIV PrEP was low among MSM in all three survey cities. These findings point to opportunities for innovative approaches to increase access to and uptake of critical prevention services to HIV-uninfected MSM.
- Our findings highlight challenges with the low reach of peer educator programmes. In South Africa, peer educators form the backbone upon which HIV prevention and treatment services are delivered to MSM and other key populations for HIV. Programme evaluations may be useful for identifying implementation barriers for these programmes, toward guiding the development of quality improvement interventions to increase the reach of peer educator services.

Disclaimer

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